REPORT OF THE EIGHTH ANNUAL CONFERENCE OF EDUCATIONAL ASSOCIATIONS, 1920.

ON January 1st and 2nd, Professor R. Douglas Laurie, the Professor of Zoology at the University College, Aberystwyth, delivered two lectures at the University of London, Gower Street.

Professor E. W. MacBride, F.R.S., took the chair at the first meeting, on January 1st, the subject being "Eugenic Instruction in the School." Dr. R. Langdon Down took the chair at the second meeting, on January 2nd, the subject being "Eugenic Instruction in Training Colleges."

The following is an abstract of the two lectures:—

I have set before myself this afternoon two objects. The first is to justify the giving of eugenic instruction in the school, and the second to suggest the way in which such instruction should be approached.

The word eugenics has during the last few years passed into the popular vocabulary. The official definition, quoted from Sir Francis Galton, the originator of the term, appears upon the cover of each copy of the EUGENICS REVIEW, as follows: "Eugenics is the study of agencies under social control that may improve or impair the racial qualities of future generations, either physically or mentally." The emphasis of the definition is upon the future generations, and, furthermore, upon the racial qualities of future generations. Eugenics is thus largely concerned with the encouragement of marriage among the fit and the discouragement of marriage among the unfit. Ethically eugenists claim that the motto of Christianity, that we should do to others as we would be done by, should be interpreted as having application also to our relations with future generations, our duty to which ought to influence in many ways the dispositions we make in the present. Eugenics has a direct contribution to make to the practical philosophy of life.

One may point out, in order to prevent any possible misunderstanding, that the eugenist has every sympathy with the work of those whose social effort is concentrated upon the improvement of environment. Indeed under the above definition he can himself work in many ways for the improvement of the environment, for heredity and environment are subtly blended. But his attention to environment is incidental to the real end which he has in view, which is the improvement of the stock through the operation of heredity. His concern is with the seed rather than with the soil; and he feels justified in making the quality of the seed his essential concern because the soil has already so many gardeners, whereas the eugenists are the only group who formally hold a brief for heredity. But of course a eugenist insists that a good soil is necessary for the proper development of even good seed. The seed, no doubt, has been almost entirely neglected by those who have hitherto

interested themselves in social endeavour; and the eugenist, realising this, is pressing for a fuller interpretation of the duties of citizenship.

A recently published text-book of hygiene, by Miss Margaret Avery, has just come into my hands; and I find therein, in a chapter upon eugenics, a very clear statement as to the achievement and limitations of the current methods of social workers. Miss Avery draws a picture, after Hector Gavin, of Bethnal Green in 1848. "Bethnal Green, owing to its industrial expansion, had just become a town. There were thirty-three miles of street in it and a hundred miles of byeways, not including courts and alleys, but only a few miles had sewers. Dustbins were unknown, as were all other forms of sanitary convenience. Slops and all other refuse were thrown out of the windows or doors into the street, where the solid parts of the refuse collected in mountainous, evil-smelling heaps; which was not surprising, since the scavengers were 'thirteen decrepit old men,' and it took them ninety days to get round the parish. Hence disease and epidemics were rife. And this was typical of many places." The social reformers got to work and the vast improvement which has been made in sanitation has had the effect of reducing the death-rate to a very remarkable extent. One might have expected considerable racial improvement also, but this one does not find. For example, the reports of the Royal Commission on the Poor Law make it appear that pauperism is on the increase rather than otherwise, and Dr. Tredgold, with the weight of his experience, states that in his view the real cause of the bulk of pauperism and of its increase in recent years is mental incapacity—a want of "grit" and independence. The environment has been so far improved that future advance in solving the problem of pauperism is largely a matter of selecting good seed.

The practical outlook of the eugenist, and the kind of contribution he has to make to citizenship, will be understood by reference to a concrete example, namely, the problem of the feeble-minded. Parliament passed a Bill in 1914 which marks a most interesting departure in legislation. The principle of heredity is recognised, the passage of the Bill following upon the evidence of a Royal Commission which showed that feeble-mindedness was hereditary, that the families of the feeble-minded are larger than those of normal people, and that the average of the next generation would therefore be by so much the better if steps were taken to prevent mentally defective stock from propagating. All this is implicitly recognised by the Act, which gives power to local authorities to draft feeble-minded persons who come under their charge into institutions where they shall be permanently segregated from the rest of the community. The most desirable type of institution would seem in general to be a farm colony, which may become partially self-supporting. Many people hardly realise that something like 20 per cent. of our prostitutes, 20 per cent. of our criminals, and from 60 to 70 per cent. of habitual drunkards are mentally defective. The feeble-minded person is naturally a pauper, though all paupers are, of course, not feeble-minded. The average capacity of the next and of all future generations will be higher without the quota of feeble-minded children handed on from the present generation, and the expense of future generations in providing for the inefficient members of the community

will be correspondingly less. In many localities, unfortunately, the Act is a dead letter, for one reason or another; and in any case it reaches only a limited number of feeble-minded folk. It is well that this should be realised by citizens generally. The Mental Deficiency Act was a sequel to the failure, in a racial sense, of the special schools for mentally deficient children. One can only speak in terms of the highest praise of the work of the special schools, but they form a striking example of the limitations of the social reformers' efforts to right the race by improving environment; for ample experience has shown that when a child leaves a special school at sixteen years of age, he has not been rendered normal. He is totally unable to look after himself in the world, and his children will inherit his mental defects in the same degree as if he had never had the special-school treatment. The only solution to the problem of the feeble-minded is that of the eugenist as partially expressed in the principle of the Mental Deficiency Act, 1913.

The combating of venereal disease, though by no means a matter only of eugenics, is so to a considerable degree, in that venereal disease in the present generation may have a gravely deleterious effect upon the qualities of the next generation. The evidence before the Royal Commission on Venereal Disease showed that more than about half of the children in the London County Council Schools for the Blind owed their blindness to gonorrhœa or syphilis in their parents. This is not heredity in the strict sense of the word, but it nevertheless seems to fall naturally within the sphere of practical eugenics, in that the qualities of the next generation are concerned. Also a high percentage of sterility is due to venereal disease, so that here a selective agent is at work affecting the average of the next generation. This is a definite problem in eugenics.

The study of pauperism involves that of eugenic considerations to a high degree, and again such wide questions of citizenship as the rise and fall of nations. One might multiply instances indefinitely. The eugenist contends, in short, that all the problems of the social reformer should be approached from many points of view, of which eugenics should be one; and that the eugenic approach is frequently necessary if the problem is to be understood and the solution found. I claim that some study of the eugenic or biological point of view is as desirable to the make-up of a citizen as the study of history, geography, mathematics and English.

The next step in my argument is that it is an essential function of the school to prepare for citizenship, and if this and my previous thesis be admitted, my consequent contention would appear to follow, namely, that it is desirable that the foundations of the eugenic ideal and of eugenic knowledge should be laid in the school. The criticism that the school time-table is already over-crowded is hardly valid, unless it be shown that biology is of less importance than all the subjects already taught. Moreover, it does not take into account the possibility that the kind of course which the eugenist would desire to see may be built out of something already taught in the school.

In my judgment the fundamental subjects which should be taught to all children in the elementary school throughout the whole period of school life are English, mathematics, history, geography and biology.

Biology is the foundational subject upon which eugenics rests, but the teacher in each of the subjects named has opportunity of introducing the eugenic ideal—thought for posterity. The teacher in English may select appropriate literature. To an understanding of history the factors of emigration, inter-marriage, restriction of family in particular strata of society, are all fundamental. Geography has a great opportunity by virtue of the mixing of races in various parts of the world. For example, in the consideration of such a matter as the coloured problem in Australia, the question of inter-marriage between coloured and white people is more fundamental than the economic factor of the coloured labour under-selling the white. As for mathematics, the problems of the eugenist very frequently involve statistical treatment. But it is biology, as the study that forms the basis upon which eugenics rests, which most concerns us in considering the carrying out of eugenic instruction in schools.

To introduce formal sex education, as a thing in itself, at the adolescent stage, is a policy open to serious objection. Yet I am clear that it is entirely preposterous to turn out the boy or girl from school as a citizen without any knowledge of sex other than that acquired out of school. To the biologist the solution of this apparent paradox is simple. The child should be brought by gradually increasing familiarity with the physiology of a selection of animals to a sufficiently ample knowledge of the mechanism and physiology of respiration, excretion, nutrition, sensitivity and reproduction. Folding cardboard models of ourselves are rather hopeless things unless led up to by a study of the functions of the organs in lower animals, and by actual examination of the internal organs of dissected specimens of these. Sex education should be a gradual progress, taken in perspective with the other bodily functions, implicit rather than explicit, and, most important of all, commenced long before the period of adolescence.

The teaching of eugenics proper to the older children does not present the same difficulties, but if the instruction be left to those of adolescent age without previous biological preparation it lacks much of its value. It is the gradual biological training that is fundamental, with its many opportunities of planting in the eugenic ideal. It is the training of the early years which has the most real effect upon character.

To turn then, to the kind of course which one would advocate, it does not matter very seriously what it is called. It would be virtually nature study, physiology, a touch of chemistry, botany, zoology and hygiene, including sex-education, infant welfare and eugenics. Biology would be a natural name to suggest for such a course. It would represent the development of what is now termed nature study; but as, unfortunately, nature study has too often been taught by some one other than a trained biologist, and is frequently without definite aim, the familiar term is hardly a stimulus to serious effort.

Some of the child's earliest interests, long before school age, concern animals. This fondness for animate things may be built into nature study relating to animals and plants from the age of six onwards. I put a good deal of stress upon the importance of the teacher having had a biological training. The animal or plant is more than a thing having a particular shape. It is little less wonderful than man. The seeds

of plants, the eggs of animals, the care of young and the animal societies all have their contribution to make to the philosophy of life.

At the age of ten or twelve years the children will be gaining some ideas as to the elements of physiology, based upon a knowledge of a variety of animals, such as starfish, lobster, butterfly, snail, fish and rabbit; and this will continue to be developed until, say, fourteen years, with the addition of some simple applications of hygiene. From fourteen to sixteen in the elementary school, or during the period of the continuation school, sex education will gradually become more explicit. Mothercraft and infant welfare will have a prominent place with girls, transmission of disease, including venereal disease, will be touched upon, and the principle of heredity will receive illustration by reference to man, lower animals, and plants; and the eugenic ideal will be made explicit, namely, the extension of our love of man so as to include our children and our children's children.

It is said by some that it is better not to introduce matters concerning sex and reproduction to the notice of the child. One replies that such matters come to the child's knowledge as it is, but often in an undesirable way. The absence of reference to such matters by those whom a child considers the more respectable members of society results in the young person coming to look upon it as hardly a proper thing to have knowledge of these things, and he is liable to be ashamed of being suspected by his elders of having such knowledge. The critics should remember, moreover—and this is a matter which I cannot too strongly emphasise—that the child will have been prepared by what is implicit in the previous biological training.

Others object that the parent is the proper person to give such instruction. One replies that in too many cases parents are worse than incapable of giving proper instruction on sex; that many parents themselves suffer, for example, from venereal disease; and that as regards eugenics in the stricter sense parents frequently care for little else in regard to their children's future than that they should marry money or position. One should have sympathy with the parents' desires as far as possible, but at the same time one should recognise that it is really more important for the future of the race that love of, and duty to, posterity, should be implanted in the child's mind; that, for example, it should be told not to steal, or even than that it should be told to keep its head clean. One replies further that the eugenist is trying to create a wider ideal of humanity and to found this upon knowledge.

It is urged again that there is no room for this foundational biology in the school time-table. One replies that the present nature study may be moulded and built up into such a biological course as will achieve the desired end, which is not the teaching of systematic zoology or botany, but the teaching of biology as one of the humanities as much as a science.

Someone may say that we have gone along very well so far without sex education and eugenics instruction in the schools. One replies that the ever-increasing complexity of the method of living requires adjustments of our educational system in accordance therewith. Besides, one may well ask in return whether it is altogether satisfactory that 10 per

cent. of the population of our large town is syphilitic, and that there are, say, 30 per cent. of the people suffering from gonorrhœa, and that half of the blind children own their blindness to venereal disease in their parents. Is it satisfactory that while it is known that feeble-mindedness is inherited and that the feeble-minded are more prolific than the normal, and that feeble-mindedness has a close association with prostitution, pauperism and criminality, we do not insist upon having effective machinery for preventing the feeble-minded from reproducing their kind? Have we really got along as we might have done had we helped to mould public opinion by introducing the eugenic ideal, based upon knowledge, to the minds of those who were growing up to be the citizens destined to form the public opinion of the next generation?

Professor Laurie recommended the following books to the members of his audience:—

Being Well-born. By Michael F. Guyer, Ph.D. The Bobbs Merrill Company, Indianapolis. $1 net. Comprises a clear statement regarding Heredity, and a consideration of suggestions as to Race Betterment.

Towards Racial Health. By Norah H. March, B.Sc. Published by Messrs. Routledge. Price 4s. 6d. Deals with sex education on Nature Study lines.

Chapter on Eugenics in *A Text-book of Hygiene for Training Colleges.* By Margaret Avery, B.Sc. Price 7s. 6d.

Publications of Eugenics Education Society (Miss Constance Brown, Secretary), 11, Lincoln's Inn Fields, London, W.C.2. The Society has also an excellent library of Eugenics literature.